Light Transport Techniques for Tensor Field Visualization
Master's Thesis Presentation

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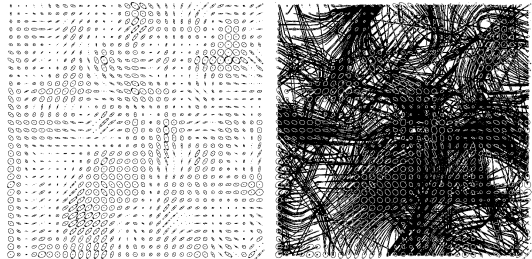
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Introduction - Tensor Fields

- tensor-valued function: $t_{ij}(\mathbf{x}): \mathbf{x} \mapsto t$,
  with $\mathbf{x} \in \mathcal{R}^n$: location vector

- tensor fields can be visualized by:
  - a) glyphs
  - b) tensor field lines (TFLs)
    $\Rightarrow$ streamlines for eigenvector fields
  - c) scalar measures:
    anisotropy index, tensor magnitude

- examples: stress tensor

Random tensor field

a) Glyphs   b) Tensor field lines